

No.	Investigator	Institution	Subject	Amount	Date	Position
70	<u>FREUND</u> , Jack, M.D. Lecturer in Pharmacology of Virginia Assistant in Medicine	Medical College of Virginia	Correlation of multitechnical procedures performed on the peripheral circulation of normal individuals in recumbent and erect positions and after exercise before and after sham and actual smoking.	17,435.00	3/15	
71	<u>SPAIN</u> , David M., M.D. Pathologist	Waldemar Medical Research Foundation, Inc.	Study of host factors in experimental induction of pulmonary tumors in mice.	12,050.00	3/14	
72	<u>RIGDON</u> , R. H., M.D. Prof. of Pathology, Dir. of Laboratory of Experimental Research	University of Texas, Medical Branch	Study the effect of methylcholanthrene on the tissues of the duck. To compare the effect of methylcholanthrene on different tissue with emphasis on the reaction in the trachea when compared with the skin of the body and the web of the foot.	5,390.00	3/21	
73	<u>FARR</u> , Wanda K., Ph.D. Research Consultant	Private Consulting Laboratories	Analyses of tars and resins from impinged and settled cigarette smoke by means of microscopical, microchemical and electron microscopical techniques.	9,650.00	3/14	
74	<u>LEUCHTENBERGER</u> Cecille Ph.D., Asso. Prof. of Cytology, School of Medicine	Western Reserve University, Institute of Pathology	Quantitative analysis of nucleoproteins in tissues from animals subjected to tobacco smoke by microspectrophotometry and interference microscopy correlated with cytological and histological studies.	23,199.24	3/14	
75	<u>WALKER</u> , Sheppard M. Associate Professor of Physiology	University of Louisville, School of Medicine	Effect of smoking and of blood levels of tobacco products on the heart.	10,220.00	4/1	
76	<u>HEALY</u> , Madeline E. McMahon, R. N.	Brusch Medical Center	Using the blood allergen diagnosis method of Healy to measure immunity and characteristics of 1000 individuals, smokers and non-smokers of varying ages, sexes, susceptibilities, habits, hobbies, temperaments, states of life, and occupations. This "Healy" test method study will furnish many clues to the problem of disease in general. It is a biochemical test, a truly scientific test, and the only one capable of measuring autonomic response.	121,460.00	4/8	

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<u>No.</u>	<u>Investigator</u>	<u>Institution</u>	<u>Subject</u>	<u>Amount</u>	<u>Date</u>	<u>Disposition</u>
101	<u>ARMEN</u> , Robert N., M.D., Chief, Medical Service; <u>COHEN</u> , Sheldon, G. M.D., Attending in Allergy	Veterans Administra- tion Hospital, Wilkes-Barre, Pa.	The effect of forced inhalation of tobacco smoke on the cardiovascular system and pulmonary tissues of normal and tobacco sensitized rabbits.	5,250.00	6/17	
102	<u>CORNMAN</u> , Ivor, Ph.D., Head of Dept. of Cellular Physiology	Hazleton Labora- tories	The nature of effects of tobacco smoke acting directly upon tissues.	26,800.00	6/20	
103	<u>CANNATA</u> , Benjamin, V. M.D., Physician & Surgeon	Benlee Research Laboratories	1st Phase. The removal of tars and its derivatives from tobacco smoke. 2nd Phase. A complete study of the entire respiratory tract on animals who have been subjected to tobacco smoke with the tars and its deriva- tives removed.	595,000.00	6/23	
104	<u>BROZEK</u> , Josef, Ph.D., Associate Professor	University of Minnesota, School of Public Health, College of Medical Sciences	A quantitative study of biological characteristics of men associated with differences in their tendency to adopt and maintain different smok- ing habits.	15,000.00	6/27	
105	<u>DEICHMANN</u> , William B., Chairman and Professor of Pharmacology	University of Miami, School of Medicine	Determination of the effects of ab- sorption of tobacco extracts from the oral cavity of the mouse and dog on the incidence of cancer of the urinary bladder, and as influenced by diets containing a normal and an elevated content of fat.	20,636.75	7/8	
106	<u>PORDY</u> , Leon, M.D., Re- search Assistant in Cardiology	The Mount Sinai Hospital	Clinical evaluation of the cardio- vascular effects of tobacco smoking.	12,765.00	7/25	
107	<u>BLADES</u> , Brian, M.D., Professor of Surgery	The George Washing- ton University School of Medicine	The effects of stress on the produc- tion of lung cancer by direct ex- posure of lung tissue to high con- centrations of tobacco smoke.	16,440.00	7/25	
108	<u>WINSOR</u> , Travis, M.D.	Heart Research Foundation and The Hospital of the Good Samaritan	Effect of tobacco and/or its con- stituents upon the vascular system of man in health and in various disease states.	6,900.00	8/1	

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No.	Investigator	Institution	Subject	Amount	Date	Disposition
77	COOPER, Mervin and Dudley, Optometrists, Res. Dir. & Business Officer respectively	Glaucoma Research	To conduct research investigations to ascertain the merit of the theory (Copyright #A161437 - Class A) that habitual smoking of cigarettes is beneficial in the prevention and re- lief of simple chronic glaucoma.	91,000.00	4/15	T/R 2
78	COLEMAN, Frank Philip, M.D., Asst. Prof. of Clinical Surgery	Medical College of Virginia	Effects of prolonged inhalation of cigarette smoke on the respiratory tract of sheep.	135,765.15	4/15	
79	KIRSNER, Joseph B., M.D.	The University of Chicago	Effect of tobacco smoking upon basal gastric secretions in man.	18,375.50	4/20	
80	FELLOWSHIP PROGRAM	50 institutions	Subjects to be chosen by the individual institutions.	25,000.00		
81	MC CARTHY, Francis P. M.D., Professor of Oral Medicine	Tufts University Dental School	Relationship between tobacco smoking and the incidence leuko- plakia of the oral cavity and the esophagus.	8,735.00	5/2	
82	SASLAW, Milton S., M.D., Director of Medical Research	National Children's Cardiac Hospital	Effects of smoking on beta hemo- lytic streptococci.	8,650.00	5/2	
83	SCHOUR, Isaac Dr.	University of Illinois, College of Dentistry	Effects of smoking on oral tissues of young adults. (Longitudinal and cross-sectional studies.)	18,597.69	5/5	
84	SCHOUR, Isaac Dr.	University of Illinois, College of Dentistry	Histologic changes in the oral, pharyngeal and nasal tissues of experimental animals subjected to tobacco smoke.	18,137.69	5/5	
85	SOROF, Sam, Ph.D. Research Associate	The Institute for Cancer Research & Lankenau Hospital Research Institute	Chemical and physical studies on the tissue proteins involved in chemical carcinogenesis.	14,423.00	5/11	

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86	<u>RITTENBERG</u> , Sydney C. Professor of Bacteriology	University of Southern California	Studies on the mechanism of bacterial metabolism of nicotine and related compounds. The ultimate goal of the project is the elucidation of the intermediary metabolism of nicotine oxidation.	4,104.00	5/12	
87	<u>BACHRACH</u> , William H., M.D. Chief, Gastroenterology Section, V.A. Hospital	University of Southern Calif- ornia School of Medicine	An investigation into the effects of smoking on gastrointestinal functions and symptoms in health and in digestive diseases.	10,600.00	5/16	
88	<u>KLASSEN</u> , Karl P., M.D. Prof. of Surgery; Chief, Div. of Thoracic Surgery	Ohio State Uni- versity Medical Center	Influence of cigarettes upon the histology of the bronchial mucosa.	5,000.00	5/20	
89	<u>THOMAS</u> , Dr. Caroline Bedell, Asso. Prof. of Medicine	The Johns Hop- kins School of Medicine	The significance of different individual patterns of circulatory response to cigarette smoking.	1,680.00	5/20	
90	<u>CRANSTON</u> , Hoy A. Director	Laboratory of Polarographic Analysis	Treatment of human neoplastic metastases with specific immune sera.	46,342.00	5/16	
91	<u>BING</u> , Richard J., M.D. Prof. of Experimental Medicine and Clinical Physiology	The Medical College of Alabama	The effect of smoking on the coronary blood flow and certain phases of myocardial metabolism in patients with arteriosclerotic or hypertensive cardiovascular disease.	11,110.00	5/24	
92	<u>TRAVELL</u> , Janet, M.D. Asso. Prof. of Clinical Pharmacology	Cornell Uni- versity Medical College	Electrocardiographic effects of nicotine in the rabbit with experimental coronary atherosclerosis.	8,910.00	5/26	
93	<u>WECHSLER</u> , Richard L., M.D. Clinical Physiologist	Montefiore Hos- pital Institute of Research	Effect of cigarette smoking on cerebral blood flow, cerebral metabolism, blood gases, blood pH, arterial pulse pressure curves, electrocardiograms, and electroencephalograms.	10,000.00	5/28	

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No.	Investigator	Institution	Subject	Amount	Date	Disposition
29A	HOMBURGER, Freddie, M.D., Dir., Cancer Res. & Cancer Control Unit of Tufts at N. E. C. Hospital	New England Center Hospital (revision of 29 submitted through Tufts University)	A study on the effects of various components of tobacco and cigarette paper upon the behavior of trans- plantable tumors in various species including the behavior of human tumors transplanted into animal species.	28,990.00	6/3	
94	PATTERSON, John M., Assistant Prof; SMITH, Walter T., Asso. Prof.	Kentucky Research Foundation for U. of Kentucky	Fundamental approaches to the evalu- ation of tobacco in regard to quality and physiological properties.	30,883.52	5/29	
95	BUTT, E. M., M.D., Chief Pathologist, Prof. of Pathology at U. of So. Cal.	Los Angeles County Hospital (Univ. of Southern Califor- nia)	It is proposed to study the trace metal storage of pulmonary and liver tissue by spectrographic and chemi- cal methods. (see application)	13,687.44	6/8	
96	CAMERON, John A., Ph.D. Professor of Anatomy	Baylor University College of Dentis- try	Study of the effects of tobacco smoke and its component gases on living mammals.	3,500.00	6/9	
97	WOOD, J. Edwin, M.D. Instructor in Medicine at Boston University School of Medicine	Massachusetts Memo- rial Hospitals, Evans Memorial	The effect of <u>prolonged</u> inhalation of tobacco smoke and of <u>prolonged</u> ab- stinence from the use of tobacco on the peripheral vascular response to acute inhalation of tobacco smoke in man.	4,000.00	6/16	
98	HELLER, John H., M.D. Executive Director	New England In- stitute for Medi- cal Research	Investigation of the relationship of surface charge of inhaled particles on their retention in the lung.	15,525.00	6/20	
99	WACHTEL, Henry K., M.D. Scientific Director and President	Chemical Hormone Corporation	Investigations concerning the rela- tions existing between cancer disease and hormonal disturbances of the pituitary gland.	42,000.00	1/12	
100	STEINHAUS, Arthur H., Professor of Physi- ology	George Williams College	Does tobacco smoke influence the production or action of sex hormone. (see original application)	10,065.00	6/16	

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29B	HOMBURGER, F., M.D., Director	Tufts College Medical School, Dept. of Surgery	A study of the effects of cigarette tars upon the behavior of transplantable tumors in rodents employing a new technique of intrauterine tumor transplantation.	25,760.00	8/6	TIR Res. Bronte File
109	GOLDSCHMIEDT, Henry, Ph.D., Research Fellow	Sydenham Hospital, Dept. of Dentistry	Investigation of the saliva of smokers and non-smokers with regard to sodium thiocyanate content.	3,480.00	9/15	h
110	WILLIAMS, William L., M.D., Assistant Prof. of Pathology	Institute of Pathology, University of Tennessee	A proposed study of the effect of multiple respiratory infections on the production of cancer of the lung.	58,517.50	8/25	
4A	WENDER, Simon H., Research Professor of Chemistry	University of Oklahoma Research Institute	A qualitative and quantitative study of the individual polyphenol content of cigarette tobacco and of the smoke and "tars" resulting from cigarette smoking, and also to study the fate of these compounds in the animal respiratory system.	8,970.00	8/26	
111	PEARLMAN, Samuel J., M.D., Attending Surgeon	Michael Reese Hospital, Ear, Nose and Throat Dept.	To determine the normal by study of exfoliated cells in the area of the nose, throat and bronchi, in patients of all ages, and in both sexes. To transmit these findings to the ear, nose and throat specialist by way of his special journals. To make a limited study of older persons, primarily non-smokers and heavy smokers.	7,500.00	9/21	
112	ALPERT, Louis K., M.D., Clinical Professor of Medicine	The George Washington University	Observation of changes in normal human bronchial epithelial cells grown in tissue culture with prolonged exposure to extracts of cigarette smoke.	10,934.20	9/27	
113	PATTERSON, John L., M.D., Assoc. Professor of Medicine	Medical College of Virginia	Detection and prognostic significance of early obstructive pulmonary disease.	6,800.00	10/3	
114	SMITH, William E., M.D.	New York University-Bellevue Medical Center (now)	Experiments pertaining to lung tumors. 1. Exploration of specificity of a rapid test for carcinogenicity of chemicals. 2. Search for a virus in pulmonary adenomas of mice. 3. Investigation of dietary deficiency of choline in relation to lung tumors.	17,920.00	10/3	

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115	THIENES, Clinton H., M.D., Ph.D., Director	Institute of Medical Research, Huntington Memorial Hospital	Effect of daily nicotine administra- tion upon adrenal glands, and upon mortality of the newborn.	6,925.00	10/10/55	B
116	KEYS, Ancel, Prof. & Director, Laboratory of Physiological Hygiene	University of Min- nesota, School of Public Health	Characteristics of men, including smoking, in populations differing in the incidence of coronary heart disease.	8,050.00	10/21/55	
117	RICHARDS, Victor, M.D., Prof. of Sur- gery	Stanford University School of Medicine	A comparative study of the effects of whole and fractionated extracts of cigarette smoke and those of known car- cinogens on I. The cytology and nuclear DNA content of epidermis in various strains of mice. and/or II. The cyto- logy and nuclear DNA content of lung and epithelium of the bronchial tree of mice and hamsters.	14,100.00	12/5/55	
118	HIGHTOWER, N. C., M.D., Ph.D.	Scott, Sherwood and Brindley Foundation for Medical Educa- tion and Research	Determination of the influence of smok- ing on gastric secretion and gastric motility in normal individuals and patients with duodenal ulcer.	2,369.00	12/5/55	
119	CHRISTENSEN, Kermit Professor of Anatomy	St. Louis Univer- sity School of Medi- cine	The relation of nicotine administra- tion to the secretion (or accumula- tion), identification, quantitation, and localization of noradrenalin and adrenalin compounds in the walls of blood vessels.	10,680.00	12/15/55	
120	RIGLER, Leo G. M.D.	City of Hope Medi- cal Center	A study of the development of carci- noma of the lung in smokers and non- smokers subjected to the influence of smog.	76,732.00	12/20/55	
121	YADOFF, Oleg, Presi- dent and Scientific Director	Foundation for Bio-Physico Re- search	Experimental research on the effect of tobacco, in particular nicotine, on tumor cells and cancer formation in small tropical Guppies, an aquarium- raised marine animal especially selected for this purpose.	12,100.00	1/3/56	

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122	<u>LOWELL</u> , Francis C., M.D. Member, Evans Memorial Associate Prof. of Med. Boston U. Sch. of Med.	Evans Memorial, Massachusetts Memorial Hospitals	To determine in the course of the next 1½ or two years the incidence in an industrial population of chronic pulmonary disease (especially emphysema and asthma), and its relation to occupation, smoking and past history of certain diseases.	\$9,900	1/3	
123	<u>JACOBSON</u> , Jerry Hart, M.D., Director, Div. of Electrophysiology	New York Eye and Ear Infirmary	A comparison of electroretino- graphy as a means of evaluating the effect of vasoconstrictor drugs upon cerebral and retinal circulation to other techniques for this determination.	4,200	1/10	
124	<u>BOROTA</u> , Alexander, M.D., Assoc. Attending Dermatologist	Bird S. Color Memorial Hospital and Home	How smoking effects the oral mucosa of geriatric patients. a) Does smoking alone produce cancer or precancer of the oral mucosa? Yes or no. b) Does smoking alone predispose to cancer or precancer formation of the oral mucosa? Yes or no. c) The role and importance of other cancerogenic factors in the domestic and occupational environment?	\$19,032.50	3/7	
26A	<u>FULTON</u> , George P., Ph.D. Professor of Biology	Boston University Graduate School, Dept. of Biology	Direct observations on blood vessels during exposure to constituents of cigarette smoke.	\$14,720.00	3/12	
125	<u>ECKSTEIN</u> , John W., M.D. Assistant Prof. of Internal Medicine & Chief, Peripheral Vascular Laboratory, Cardiovascular Research Laboratories.	State University of Iowa, College of Medicine	Responses of the Peripheral Veins in Man to the Inhalation of Tobacco Smoke.	\$3,200.00	3/12	

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<u>No.</u>	<u>Investigator</u>	<u>Institution</u>	<u>Subject</u>	<u>Amount</u>	<u>Date</u>	<u>Disposition</u>
126	<u>BONNER</u> , James, M.D.	California Institute of Technology	Enzymatic study of methylation reactions in plant tissues.	\$10,508.	3/20	
127	<u>TIECKE</u> , Richard W. D.D.S., Assoc. Prof. of Pathology	Northwestern Univ.	The Role of Tobacco in Oral Cancer.	8,573.	3/20	
128	<u>LARSON</u> , Paul S., Ph.D. Professor of Pharmacology	Medical College of Virginia	Enzymatic Transformations of Nicotine.	29,080.	3/20	
82A	<u>SASLAW</u> , Milton S., M.D. Director of Medical Research. <u>STREITFELD</u> , Murray M., Ph.D., Bacteriologist	National Children's Cardiac Hospital	Effects of Smoking on Beta Hemolytic Streptococci.	8,650.	5/2	
129	<u>KAISER</u> , E.R., Director of Research	American Society of Heating and Air Conditioning Engineers, Inc.	Tobacco Smoke Odor and Ventilation.	7,500.	4/4	
130	<u>HOLLAND</u> , Robert H., M.D. Chief, Thoracic Surgery	Veterans Administration Hospital	Effect of tobacco smoke on the respiratory passages of the rabbit.	17,500.	4/11	
131	<u>RIGDON</u> , R.H., M.D., Prof. of Pathology - Director, Laboratory of Experimental Pathology.	University of Texas Medical Branch	a) Compile all reference pertaining to cancer of the lung. b) Prepare paper on cancer of the lung between 1900 to 1930. c) Prepare paper on cancer of the lung between 1930 and 1935. d) Check cases of cancer of the lung so diagnosed in hospital with ultimate diagnosis as recorded on death certificates.	\$8,567.50	4/2	

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132	OSTFELD, Adrian M., M.D. Assistant Prof. of Preventive Medicine	University of Illinois	A biomicroscopic assay of bulbar conjunctival vascular reactivity in hypertension employing topical and parenteral pharmacologic agents.	\$6,300.	4/19	
133	PERKINSON, Jesse D., Jr. M.D. Associate Prof. of Chemistry	The University of Tennessee	Relationship of tobacco leaf metabolism to degree of hydration.	\$11,730.	4/19	

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